

What is claimed is:

1           1.       A gas drier comprising:  
2           an igniter, connected to a first terminal providing a power signal with respect to a  
3       neutral terminal, for initiating a flame;  
4           a normally closed flame detection switch, connected between said igniter and the  
5       neutral terminal to receive the power signal via said igniter, for detecting a presence of the  
6       initiated flame by opening; and  
7           a sustaining relay for providing an alternative path of conduction with respect to said  
8       flame detection switch.

1           2.       A gas drier comprising:  
2           an igniter having a first terminal connected to a power supply terminal to ignite a gas;  
3           a flame detection switch having a first terminal connected to a second terminal of said  
4       igniter, to maintain a closed state at a normal operating state time, said flame detection switch  
5       being a normally closed type switch that is opened when a flame of the igniter is detected;  
6           a thermostat switch having one terminal connected to a second terminal of said flame  
7       detection switch, to maintain a closed state at a normal operating state, said thermostat switch  
8       being a normally closed type switch that is opened by a detection of a state of overheating;  
9           a first valve coil having one end grounded;  
10          a second valve coil having one end connected to the first terminal of said flame  
11       detection switch;  
12          a sustaining relay comprising:  
13               an operating coil having one end connected to the other end of said first valve

14 coil and the other end grounded; and  
15 a pair of contacts respectively connected across said flame detection switch;  
16 and  
17 a rectifier bridge having an output terminal tied in common to said first and second  
18 valve coils and the operating coil of said sustaining relay and a pair of input terminals  
19 respectively connected to said sustaining relay and the first terminal of said flame detection  
20 switch.

1 3. The apparatus as claimed in claim 2, wherein the contacts of the sustaining  
2 relay maintain an open state at the normal operating state and are switched to a closed state  
3 when power from said rectifier bridge is applied to the operating coil.